

DEPARTMENT of ENVIRONMENTAL SERVICES
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: PICKEREL POND	Lake Area (ha):	30.27
Town: LACONIA	Maximum depth (m):	7.6
County: Belknap	Mean depth (m):	3.8
River Basin: Merrimack	Volume (m ³):	1152500
Latitude: 43°36'01" N	Relative depth:	1.2
Longitude: 71°30'42" W	Shore configuration:	1.38
Elevation (ft): 615	Areal water load (m/yr):	4.99
Shore length (m): 2700	Flushing rate (yr ⁻¹):	1.30
Watershed area (ha): 310.8	P retention coeff.:	0.66
% watershed ponded: 0.0	Lake type:	natural

<u>BIOLOGICAL:</u>		19 February 1998	9 July 1997
DOM. PHYTOPLANKTON (% TOTAL)	#1	DINOBRYON 65%	DINOBRYON 60%
	#2	UROGLENOPSIS 20%	CERATIUM 10%
	#3	SYNURA 8%	ASTERIONELLA 10%
PHYTOPLANKTON ABUNDANCE (units/mL)			
CHLOROPHYLL-A (µg/L)			4.76
DOM. ZOOPLANKTON (% TOTAL)	#1	ASPLANCHNA 25%	CYCLOPOID COPEPOD 25%
	#2	CONOCHILUS 25%	DAPHNIA 18%
	#3		CALANOID COPEPOD 14%
ROTIFERS/LITER		44	29
MICROCRUSTACEA/LITER		4	79
ZOOPLANKTON ABUNDANCE (#/L)		52	122
VASCULAR PLANT ABUNDANCE			Common
SECCHI DISK TRANSPARENCY (m)			2.6
BOTTOM DISSOLVED OXYGEN (mg/L)		8.7	1.2
BACTERIA (E. coli, #/100 ml)	#1		
	#2		
	#3		

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m): 4.5
Hypolimnion volume (m³): 51500
Anoxic volume (m³): None

CHEMICAL:

Lake: PICKEREL POND

Town: LACONIA

	19 February 1998		9 July 1997		
DEPTH (m)	1.0	3.0	1.5		4.5
pH (units)	6.0	6.2	6.9		6.1
A.N.C. (Alkalinity)	4.9	7.6	5.7		5.9
NITRATE NITROGEN	< 0.05	0.06	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN	0.40	0.50	0.40		0.30
TOTAL PHOSPHORUS	0.014	0.010	0.015		0.019
CONDUCTIVITY (μ mhos/cm)	102.0	96.7	78.9		79.6
APPARENT COLOR (cpu)	50	40	28		36
MAGNESIUM			0.73		
CALCIUM			3.6		
SODIUM			10.3		
POTASSIUM			0.59		
CHLORIDE	23	21	17		17
SULFATE	4	3	3		3
TN : TP	29	56	27		16
CALCITE SATURATION INDEX			3.1		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1997

D.O. S.D. PLANT CHL TOTAL CLASS

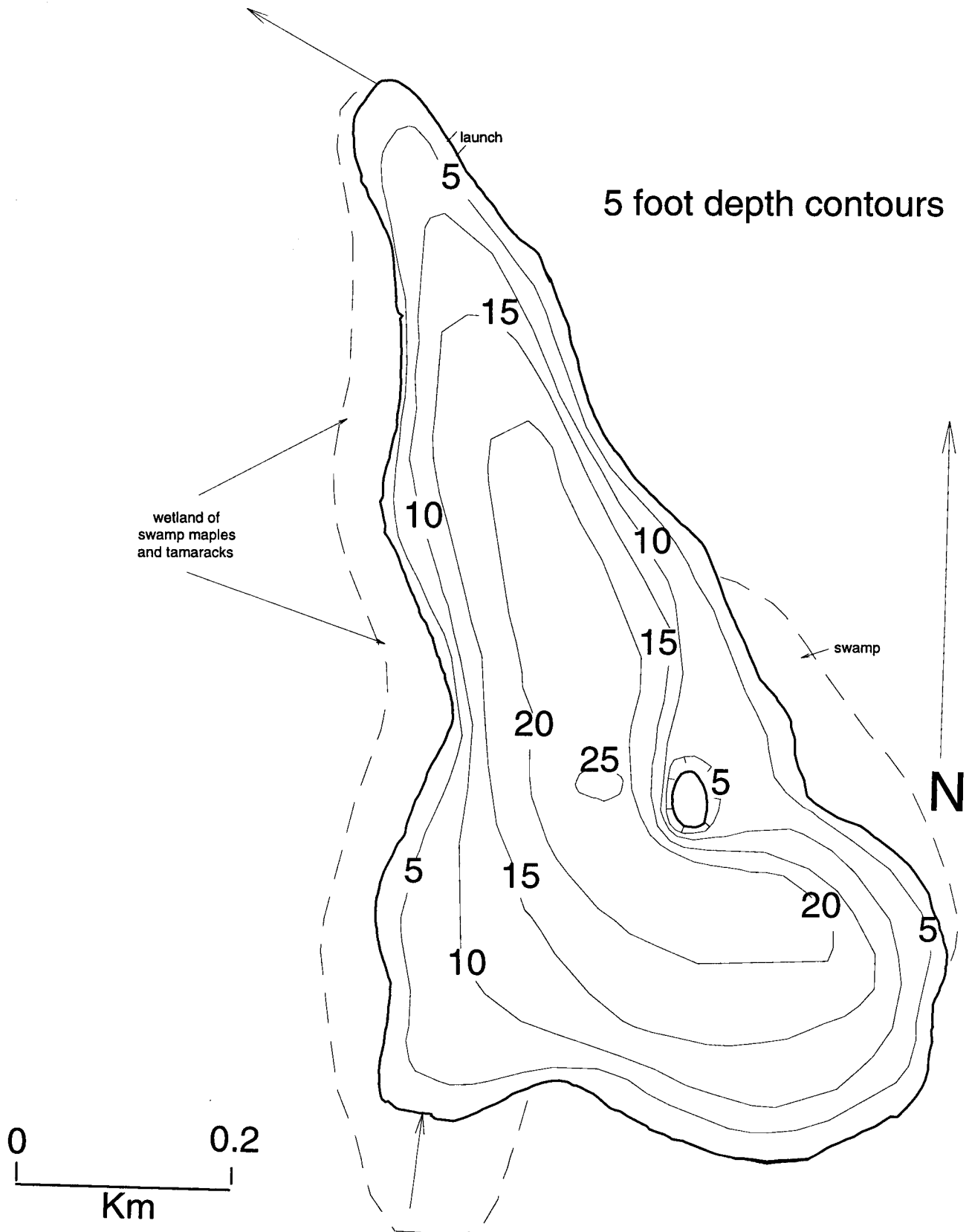
1	3	3	1	8	Meso.
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COMMENTS:

1. This pond was previously surveyed in 1984 and was classified eutrophic at that time. The major changes in trophic parameters were in chlorophyll (decrease from 22 to less than 5 mg/m³) and in bottom dissolved oxygen (no oxygen below 3 meters in 1984). Note, the 1984 sample date was in late August and may be the reason for the greater oxygen depletion at that time.
2. The pond was placed on the 303(d) list of impaired waters due to high chlorophyll in 1984, but was removed after the 1997 sampling.
3. Moderate chloride and sodium values suggest some salt runoff into the pond.
4. Narrow gravel lane to launch boat at northern end of the pond near the outlet; no parking except along road.
5. Mostly undeveloped shoreline.

Pickerel Pond

Laconia



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TOWN: LACONIA
WEATHER: OVERCAST & WARM; LT. BREEZE

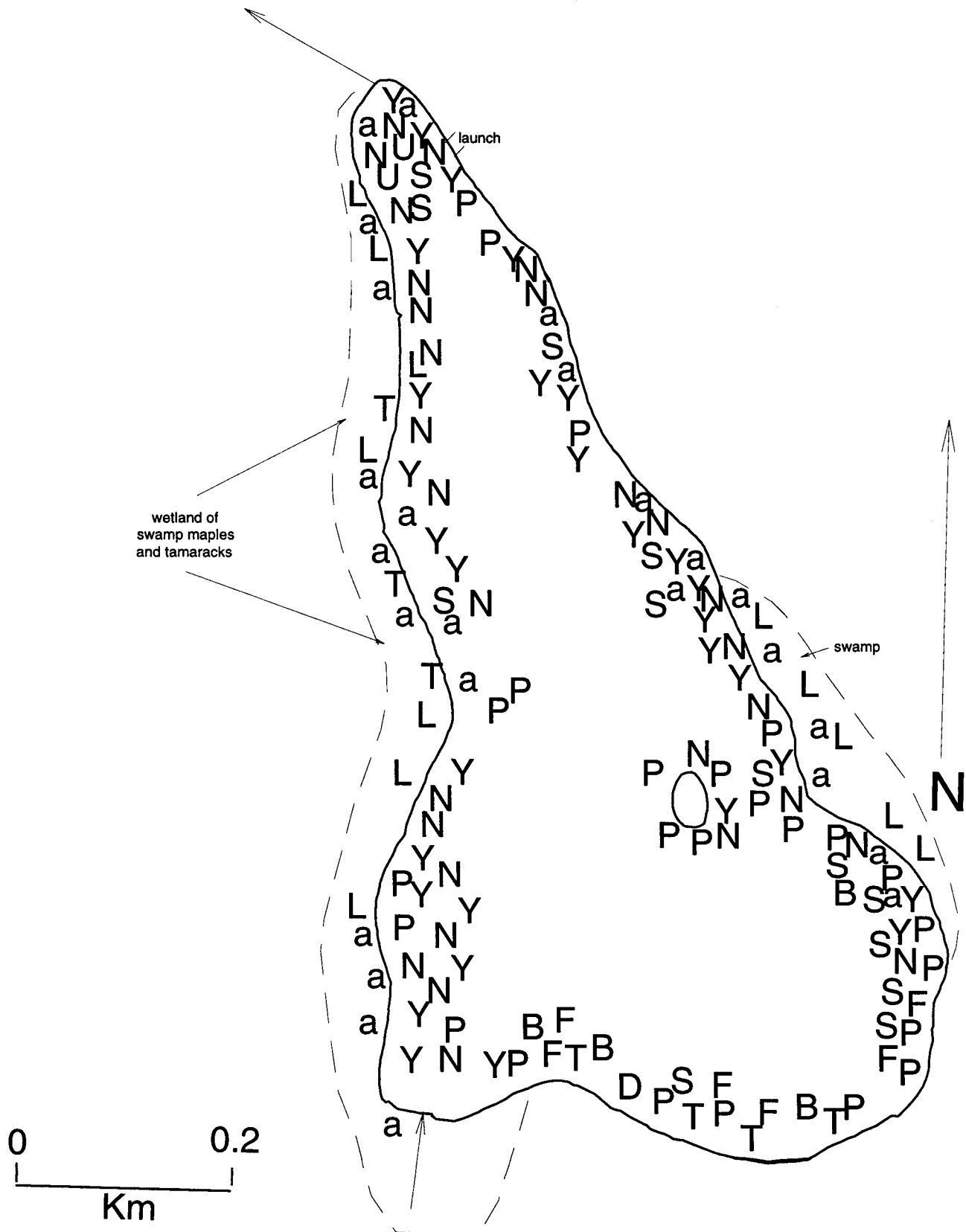
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COMMENTS :

*Dissolved oxygen values are in mg/L

Pickerel Pond

Laconia



[illegible]

DATE: 07/09/97

ABUNDANCE

COMMON

Common

Common

Common

Scattered

Common

Scattered

Sparse

Scattered

Sparse

Sparse

Sparse

Sparse

GENERAL OBSERVATIONS:

1. Plants were common along most of the shoreline.
2. Wooded wetlands were along much of the shore.
3. Beaver lodge was present.